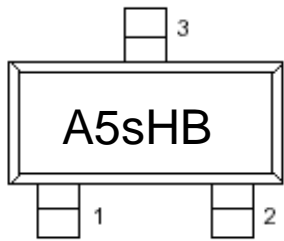


MOSFET

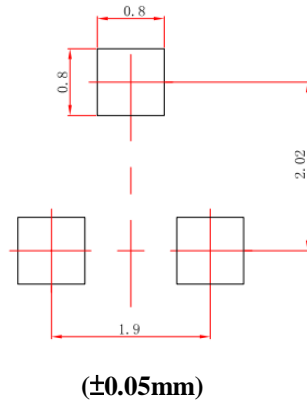
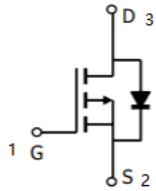
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Suggested Layout

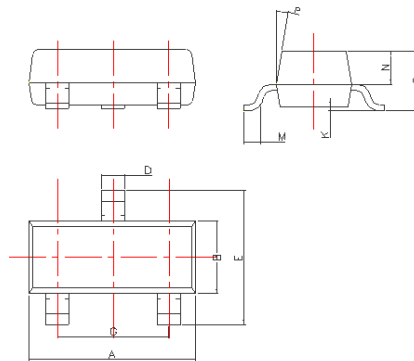
SOT-23



Top view



Dimension



DIM	Millimeters
A	2.85~3.04
B	1.30±0.10
C	1.00±0.10
D	0.45±0.05
E	2.25~2.55
G	1.90±0.1
K	0.00-0.10
M	0.20 min
N	0.60±0.10
P	7±2°

MAXIMUM RATINGS (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Drain-Source Voltage	VDSS	-12	Vdc
Gate-Source Voltage	VGSS	±8	Vdc
Drain Current—Continuous	ID	-4.1	Adc
Peak Drain Current	IDM ¹	-16	Adc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation TA=25°C	PD	400	mW
Thermal Resistance from Junction to Ambient	RθJA	313	°C/W
Junction and Storage Temperature	TJ, Tstg	150, -55 to +150	°C

1. Repetitive Rating : Pulse width limited by maximum junction temperature

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

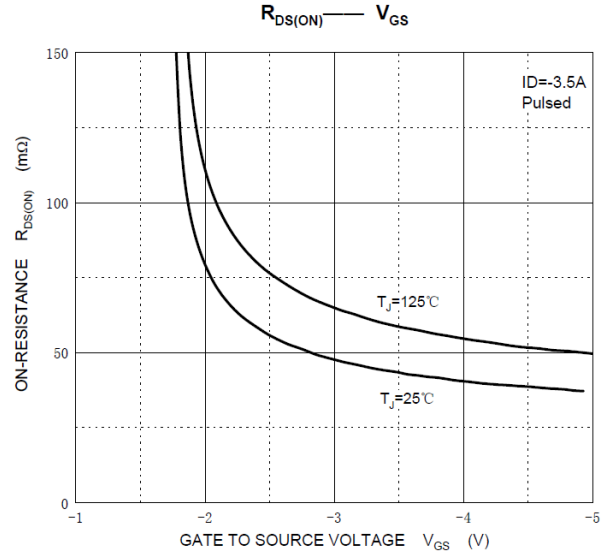
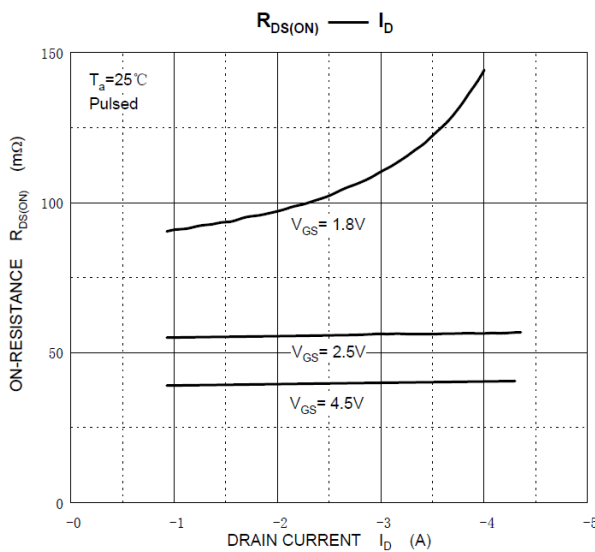
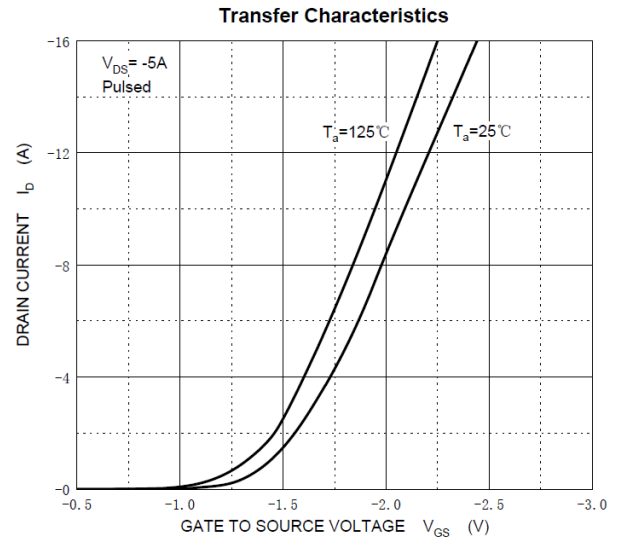
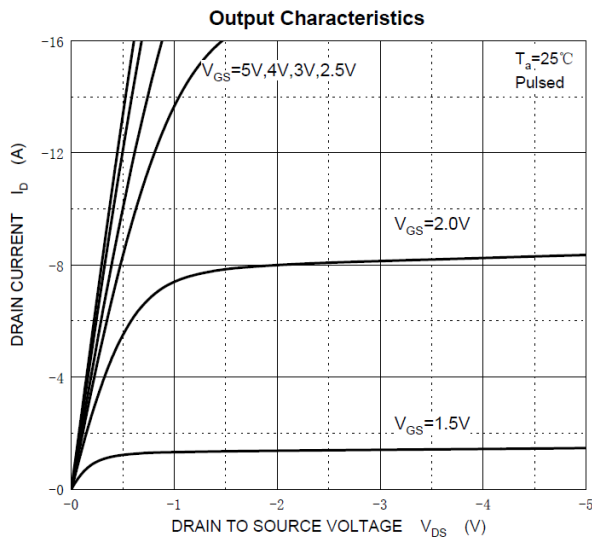
Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=-250µA	-12	—	—	V
Zero Gate Voltage Drain Current	IDSS	VDS=-8V, VGS=0V	—	—	-1.0	µA
Gate-Body Leakage Current, Forward	IGSS	VGS=±8V	—	—	±100	nA
Gate Threshold Voltage	VGS(th)	VDS=VGS, ID=-250µA	-0.50	-	-1.0	V
Static Drain-Source On-State Resistance	RDS(on)	VGS=-4.5V, ID=-3.5A	—	40	50	mΩ
		VGS=-2.5V, ID=-3.0A	—	55	65	
		VGS=-1.8V, ID=-2.0A	—	90	120	
Forward Transconductance	gfs	VDS=-5V, ID=-4.1A	6	-	-	S
Diode Forward On-Voltage	VSD	VGS=0V, IS=-3.0A	—	0.75	1.3	V

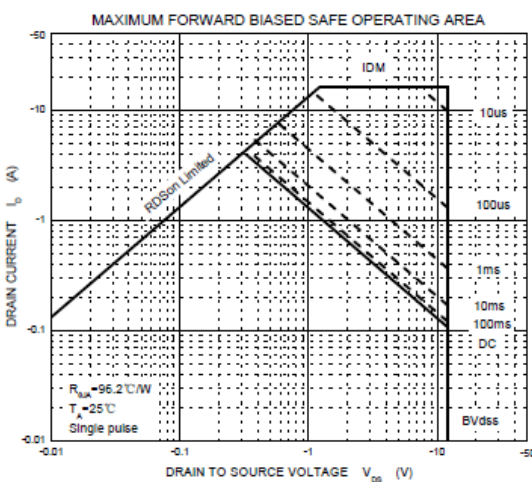
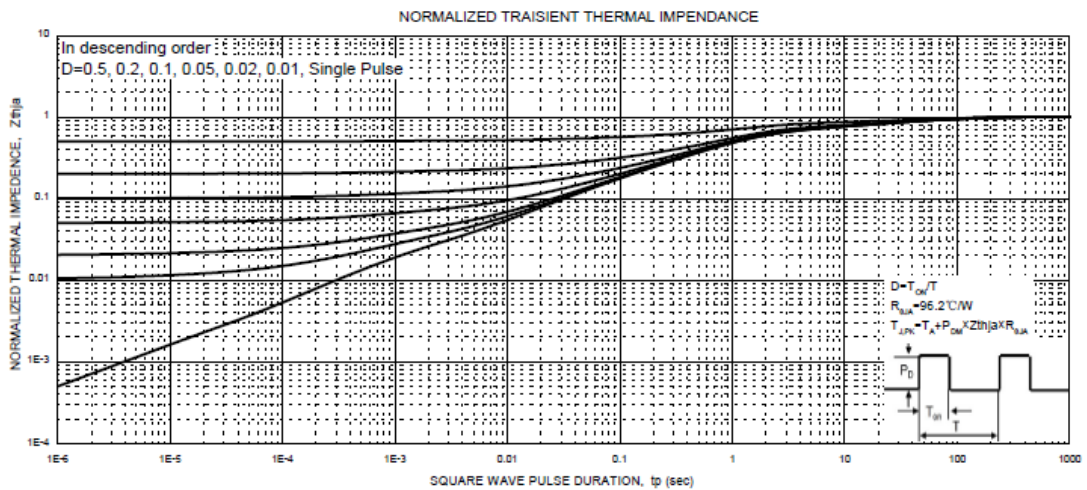
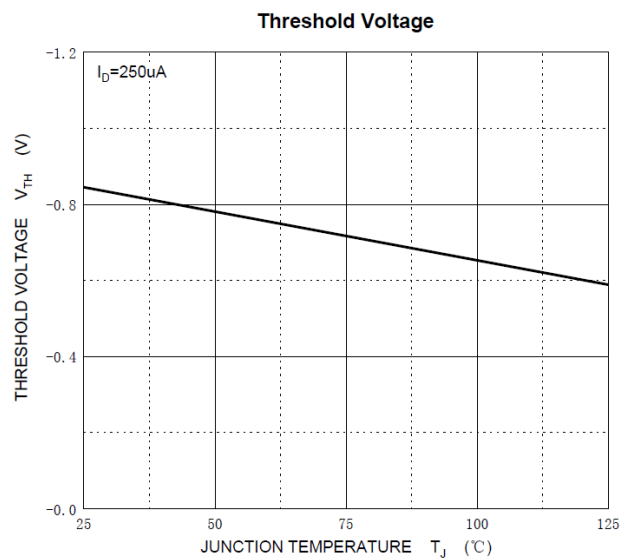
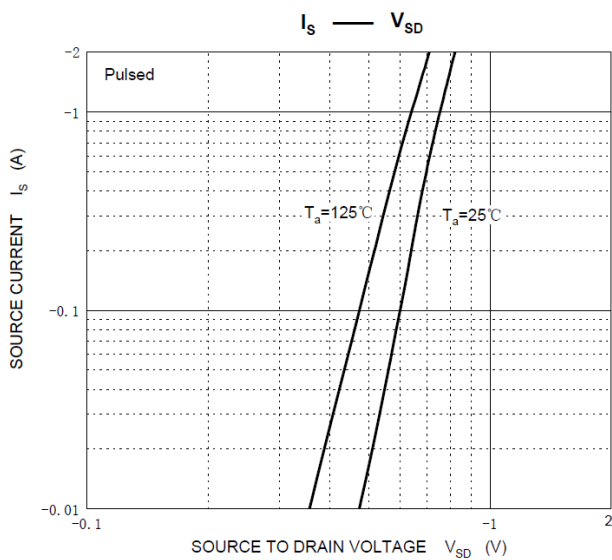
Kingtronics®

CDL2305-ME

Turn-On Delay Time	$t_{d(on)}$	VDD = -4V, RL = 1.2Ω ID = -3.3A, VGEN = -4.5V, RG = 1Ω	—	13	20	ns
Turn-On Time	tr		-	35	53	
Turn-Off Delay Time	$t_{d(off)}$		-	32	48	
Turn-On Fall Time	tf		-	10	20	
Input Capacitance	Ciss	VDS = -4V, VGS = 0V, f = 1.0 MHz	-	740	-	pF
Output Capacitance	Coss		-	290	-	
Reverse Transfer Capacitance	Crss		-	190	-	
Total Gate Charge	QG	VDS = -4V, ID = -4.1A, VGS = -2.5V	-	4.5	-	nC
Gate to source charge	QGS		-	1.2	-	
Gate to drain charge	QGD		-	1.6	-	

Typical Performance Characteristics





Note: Specifications are subject to change without notice.